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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/666,222	09/18/2003	Itzhak Levy	F-8249	8467

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EXAMINER

SORRELL, ERON J

ART UNIT PAPER NUMBER

2182

DATE MAILED: 03/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/666,222

Applicant(s)

LEVY, ITZHAK

Examiner

Eron J. Sorrell

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 9/18/03.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Claim 6 recites the limitation "substantially automatic." It is unclear to the Examiner the amount of intervention allowable to be considered "*substantially* automatic (emphasis added)."

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the

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effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1,2,7, and 8 are rejected under 35 U.S.C. 102(e) as being anticipated by Johnson et al. (U.S. Pub. No. 2003/0033477 to "Johnson").

6. Referring to claim 1, Johnson teaches a computer system (see figure 2), comprising:

a processor generating data output (see item 204 in figure 2);

a hard disk drive adapter (see item 202 in figure 2) forming an intermediate adapter connected to receive the data output from said processor and configured to distribute the data output to a plurality of channels (see paragraphs 27-28 on page 2); and

a plurality of data storage devices (see items 206-212 in figure 2) each connected to said hard disk drive adapter via a respective serial ATA cable and each receiving the data output of a respective channel (see paragraphs 27-28 on page 2).

7. Referring to claim 2, Johnson teaches the intermediate adapter is configured to mirror or split the data output to the

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plurality of channels (i.e. RAID 1) (see paragraph 36 on page 4).

8. Referring to claim 7, Johnson teaches in a computer system having a processor generating data output and at least one data storage device for receiving and storing the data output (see figure 2), the improvement which comprises:

a plurality of serial ATA data storage devices (see items 206-212 in figure 2 and paragraph 22 on page 2);

an intermediate adapter (item 202 in figure 2) connected between the processor and the data storage devices for receiving the data output from the processor and for outputting the data to the data storage devices (see paragraph 27 on page 2);

means connected in said intermediate adapter for distributing the data output to a plurality of channels (see item 216 in figure 2 and paragraph 28 on page 2); and

a plurality of serial ATA connections connecting each of the channels to a respective one of said serial ATA data storage device (see items coupling the disk drives to the RAID controller and paragraph 22 on page 2).

9. Referring to claim 8, Johnson teaches the serial ATA connections are serial ATA cables connecting the channels of

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said intermediate adapter to the data storage devices (see items coupling the disk drives to the RAID controller and paragraph 22 on page 2)

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 3-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson in view of Industry Momentum Builds Behind Serial ATA (hereinafter "Brahmarouthu").

12. Referring to claim 3 and 4, Johnson fails to explicitly teach said processor is a central processor with a serial ATA connector communicating with said intermediate adapter via a serial ATA cable and wherein said processor is configured to generate the data in serial ATA format and said intermediate adapter is configured to communicate in the serial ATA standard,

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however Johnson teaches the system is suitable for implantation using SATA protocols (see paragraph 22 on page 2).

Brahmarouthu teaches, in an analogous system, the CPU connected to peripherals via a serial ATA cable (see figure 2 and page 4).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the system and method of Johnson with the above teachings of Brahmarouthu such that the CPU is connected to the intermediate adapter via a serial ATA cable.

One of ordinary skill in the art at the time of the applicant's invention would have been motivated to modify the teachings of Johnson with the above teachings of Brahmarouthu because Brahmarouthu teaches serial ATA cables are inexpensive and lead to reduced board real estate (see items 3 and 7 of SATA benefits on page 4).

13. Referring to claim 5, Johnson teaches a hard disk drive adapter configured to form an intermediate adapter, comprising a plurality of serial ATA interfaces each for communicating with a respective serial ATA storage device (see connections coupling RAID controller to disk drives 206-212),

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and means for mirroring, or splitting, a data input from the central processor to a plurality of channels each assigned to a respective one of the serial ATA interfaces for communicating with the serial ATA storage devices (see paragraph 27 on page 2).

Johnson fails serial ATA interface for communicating with a central processor.

Brahmarouthu teaches, in an analogous system, the CPU connected to peripherals via a serial ATA cable (see figure 2 and page 4).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the system and method of Johnson with the above teachings of Brahmarouthu such that the CPU is connected to the intermediate adapter via a serial ATA cable.

One of ordinary skill in the art at the time of the applicant's invention would have been motivated to modify the teachings of Johnson with the above teachings of Brahmarouthu because Brahmarouthu teaches serial ATA cables are inexpensive and lead to reduced board real estate (see items 3 and 7 of SATA benefits on page 4).

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14. Referring to claim 6, Johnson teaches the intermediate adapter is configured to implement substantially automatic, substantially instantaneous RAID 1 hard disk drive mirroring, or other disk data transfer, with serial ATA (see paragraph 22 of page 2).

15. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson in view of Stolowitz (U.S. Patent No. 6,772,108).

16. Referring to claim 9, Johnson fails to teach the intermediate adapter is entirely transparent to the computer system.

Stolowitz teaches in an analogous system, an intermediate storage adapter that is entirely transparent to the system (see lines 17-30 of column 3).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the system of Johnson with the above teachings of Stolowitz. One of ordinary skill in the art would have been motivated to make such modification in order to enable RAID mirroring without adding any overhead to the processor as suggested by Stolowitz (see lines 17-30 of column 3).

Conclusion

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Pub No. 2004/0019709 to Bissessur et al. is cited as it shows a system comprising a processor, a hard disk adapter and a plurality of data storage devices connected to the hard disk adapted via SATA cables.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eron J. Sorrell whose telephone number is 571 272-4160. The examiner can normally be reached on Monday-Friday 8:00AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Huynh can be reached on 571-272-4147. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

EJS

February 28, 2006



KIM HUYNH
SUPERVISORY PATENT EXAMINER

3/2/06